

## **REMARKS**

### **1. Status of the Claims**

Claims 1, 2, 4-8, 14, 15, 22-25, and 75-80 are pending. Claims 3, 9-13, 16-21, 28-42, and 45-74 stand previously canceled.

With entry of this amendment, claims 26, 27, 43, 44, and 75-79 are canceled, and claims 1, 5, and 7 stand amended. Applicants have added new claims 81-100.

The amendments to the claims and the new claims are supported by the specification at least by the original claims and in the specification at least at page 16, line 24 to page 17, line 4; page 86, lines 1-23; page 90, lines 5-14; page 83, lines 4-14; page 78, line 10 to page 79, line 10; Table 5; page 93, lines 12-18; page 105, lines 14-25; page 17, lines 1-7; Table 6 on page 114; page 113, line 25 to page 114, line 7; page 66, lines 3-12; and page 82, lines 10-15. Accordingly, Applicants believe no prohibited new matter has been introduced in to the application by entry of this amendment. Amendments to the claims have been added without disclaimer of or prejudice to any of the subject matter canceled by way of the amendment. Applicants reserve the right to file a divisional or continuation application under any of the subject matter canceled by way of the amendment.

### **2. Summary of the Restriction**

In the Office Action, the Examiner requires restriction of the invention to one of the following groups:

**Group I:** Claims 1, 2, and 4-8, which are “drawn to an isolated nucleic acid sequence of SEQ ID NO:1, classified in class 536, subclass 23.1.”

**Group II:** Claims 14 and 15, which are “drawn to a method for identifying a protein involved in bone modulation comprising identifying a protein has an expression level different in a first host comprising Zmax1 gene when compared to a second host comprising the HBM gene, classified in class 530, subclass 350.”

**Group III:** Claims 22, 23, and 80, which are “drawn to a method for identification of a candidate molecule involved in bone modulation by identifying molecules that binds to or inhibit the binding of molecules to

nucleic acid sequences SEQ ID NO:1 and SEQ ID NO:2, classified in class 530, subclass 387.1.”

**Group IV:** Claims 24 and 25, which are “drawn to a method of pharmaceutical development for treatment of bone development disorders by identifying a molecule that binds to the amino acid sequence of SEQ ID NO: 2, classified in class 424, subclass 130.1.”

**Group V:** Claims 26 and 27, which are “drawn to a method of pharmaceutical development for treatment of bone development disorders by obtaining a first and second cell free extract contains Zmax1 gene/protein, and HBM gene/protein respectively, identifying a molecule that causes the first cell free extract to exhibit a characteristic feature of the second cell free extract, classified in class 435, subclass 6.”

**Group VI:** Claims 26 and 27, which are “drawn to a method of pharmaceutical development for treatment of bone development disorders by obtaining a first and second cell that contain Zmax1 gene/protein, and HBM gene/protein respectively, identifying a molecule that causes the first cell to exhibit a characteristic feature of the second cell, classified in class 435, subclass 325.”

**Group VII:** Claims 26 and 27, which are “drawn to a method of pharmaceutical development for treatment of bone development disorders by obtaining a first and second animal that contain Zmax1 gene/protein, and HBM gene/protein respectively, identifying a molecule that causes the first animal to exhibit a characteristic feature of the second animal, classified in class 800, subclass 8.”

**Group VIII:** Claims 43 and 44, which are “drawn to a method for treating bone development disorders comprising administering a molecule that binds to the nucleic acid sequence of SEQ ID NO: 1 to a patient in need thereof, classified in class 536, subclass 24.5.”

**Group IX:** Claims 75-79, which are “drawn to an isolated nucleic acid of at least 15 contiguous nucleotides that comprises a polymorphic site, classified in class 536, subclass 24.31.”

See Office Action, pages 2-3.

### 3. Election

To comply with the requirements of 37 C.F.R. § 1.143, Applicants provisionally elect, *with traverse*, to prosecute the invention of **Group I** (*i.e.*, claims 1, 2, and 4-8). Applicants also respectfully provisionally elect the species associated with the sequences for Zmax1, *i.e.*, SEQ ID NO: 1 (nucleic acid) and SEQ ID NO: 3 (amino acid). The election of the species is being made for search purposes only.

M.P.E.P. § 803 states that an application may be properly restricted to one or more claimed inventions *only* if (1) the inventions are independent or distinct as claimed, *and* (2) there is a *serious burden* on the Examiner if restriction is not required. Under M.P.E.P., the restriction requirement demands that not only must there be a burden, but it must be a *serious* burden. Regardless of whether inventions are independent or distinct, Applicants respectfully assert that the Examiner need not have restricted the application into eleven groups. M.P.E.P. § 803 requires that “[i]f the search and examination of an entire application can be made without serious burden, the Examiner must examine it on the merits, even though it includes claims to independent or distinct inventions.” Additionally, at all times, restriction is a *discretionary tool*. It is not something that is required. Therefore, it is not mandatory to make a restriction requirement in all situations where it would be deemed proper. The Office does not provide any substantiation of why a burden, let alone a serious burden, exists between each of the Groups. Accordingly, Applicants respectfully request reconsideration of the restriction.

Additionally, Applicants point out that several of the claim groups lie within the same searchable class. For example, Groups I, VIII, and IX fall within Class 536; Groups II and III fall within class 530; and, Groups V and VI fall within class 424. This is evidence that there would be no serious burden to search the claims that fall within the same class as the search would be co-extensive. Therefore, the subject matter falling within at least these classes should be rejoined.

For at least the reasons stated above, Applicants respectfully request reconsideration or the restriction, withdrawal of the instant restriction requirement, and rejoinder of the groups as indicated, regardless of the cancellation of the claims.

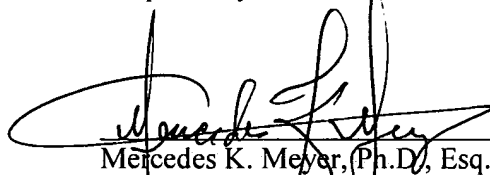
### **CONCLUSION**

Should the Examiner have any questions or comments regarding Applicants' amendments or response, she is asked to contact Applicants' undersigned representative at (202) 842-8821. Please direct all correspondence to the below-listed address.

In the event that the Office believes that there are fees outstanding in the above-referenced matter and for purposes of maintaining pendency of the application, the Office is authorized to charge the outstanding fees to Deposit Account No. 50-0573. The Office is likewise authorized to credit any overpayment to the same Deposit Account Number. The undersigned is signing in her authority under 37 C.F.R. § 1.34(b).

Respectfully submitted,

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